

Remark

Applicants respectfully request reconsideration of this application as amended. Claims 1-17 are cancelled and replaced by new Claims 18-45. The new claims are very similar to the old claims, however, so many grammatical and stylistic amendments have been made that replacement claims are believed to be easier to read and evaluate than amended claims would be. Therefore, Claims 18-45 are present for examination.

Drawings

The Examiner has rejected the drawings under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims. This rejection is closely related to the objection to the specification and is discussed in the next paragraph. In addition, Applicants submit herewith a replacement sheet for Figure 3 which omitted certain details described in the specification.

Specification

Claims 1 and 2 are objected to because of the following informalities: Claims 1 and 2 and summary of the invention disclose first and second mobile devices, however the detailed description and drawings only show one mobile device 30. First, Applicants respectfully submit that two mobile devices are described in the application. The first mobile device 10 is one that uses uplink location processing as shown in Figure 1. The second mobile device 20 is one that uses downlink location processing as shown in Figure 2. Since the system is designed to operate using existing handsets these are shown in Figures that are labeled "PRIOR ART."

In addition, Claims 1 and 2 are replaced by Claims 18 and 19. In Claim 18, the mobile devices do not form part of the claim. Signals are received only from one mobile device, the

second mobile device, and the second mobile device is still not part of the claimed invention. The receiving is performed, for example, by the downlink receiver 44 of Figure 4A or by the MLC 39 of Figure 3. In Claim 19, a mobile device is part of the claim, however, only one mobile device, the second mobile device, performs the claimed operations. Accordingly, the new claims are believed to overcome the rejections.

35 U.S.C. §112 Rejection

The Examiner has rejected Claim 9 under 35 U.S.C. §112, second paragraph, as incomplete. Claim 9 corresponds to new Claim 35. Claim 35 has been rewritten from Claim 9 to overcome the rejection.

35 U.S.C. §103 Rejection

Lundqvist

The Examiner has rejected Claims 1-3, 5 and 12 under 35 U.S.C. §103 (a) as being unpatentable over Lundqvist, Publication No. WO 99/049691 A2, ("Lundqvist") in view of the admitted prior art. The limitations of canceled Claims 1, 3, 5, and 12 are similar to those of new Claims 18, 24, 31, and 38. Claim 18 has uplink location and downlink location using the same three measurement units. The Examiner suggests that it would be obvious to perform both uplink location from Lundqvist and downlink location from Figure 2 of the specification, however, there is no suggestion in the art to combine uplink and downlink location. Reliability would not be enhanced, as the Examiner suggests, because the uplink location is performed on one mobile and the downlink location is performed on another mobile. In addition, the invention achieves a kind of

synergy not seen in the prior art because the same at least three measurement units are used for both uplink and downlink.

Applicants respectfully submit that absent any suggestion or motivation in the prior art to combine uplink and downlink using the same at least three measurement units, Claim 18-23 are allowable.

With respect to Claim 24, the uplink and downlink location processing is performed for a single mobile device. While this may improve reliability or accuracy, there is still no suggestion of such a combination in the references. In addition, there is further no suggestion of using the same at least two measurement units for both uplink and downlink processing. Accordingly Claims 24-30 are believed to be allowable. Claims 31-45 also relate to combined uplink and downlink location and are believed to be allowable on similar grounds.

35 U.S.C. §103 Rejection

Lundqvist in view of Morris

The Examiner has rejected Claim 6 under 35 U.S.C. §103 (a) as being unpatentable over Lundqvist, in view of Morris, U.S. Patent No. 6,314,535 B1 ("Morris"). The Examiner suggests that Morris shows an uplink processor and a downlink processor implemented in a single device. However, Morris is directed to FEC (Forward Error Correction) codes and to using error rates to adjust coding rates for optimum data throughput. There is no suggestion nor motivation to apply FEC technologies to location measurement units or to mobile location centers.

35 U.S.C. §103 Rejection

Lundqvist in view of Hattey

The Examiner has rejected Claim 7 under 35 U.S.C. §103 (a) as being unpatentable over Lundqvist, in view of Hattey, U.S. Patent No. 5,408,680 A (“Hattey”). The Examiner suggests that Hattey shows an uplink processor and a downlink processor in discrete devices. However, Hattey is directed to single channel and trunked repeater stations. There is no suggestion or motivation to apply a trunked repeater station architecture to location measurement units or to mobile location centers.

35 U.S.C. §103 Rejection

Lundqvist in view of Fischer

The Examiner has rejected Claims 10-11 and 16-17 under 35 U.S.C. §103 (a) as being unpatentable over Lundqvist, in view of Fischer, U.S. Patent No. 6,295,455 B1 (“Fischer”). The Examiner suggests that Fischer shows determining times of arrival for two different communications protocols, namely TDMA and GSM. However, Fischer is directed only to GSM. The statement at Col. 5 is that the invention is adaptable to other non-GSM systems, but there is no suggestion that more than one system be supported at the same time or in a single location system. The statement in Col. 9 refers to TDMA aspects of GSM in a generic sense not to TDMA as a communications standard. GSM is a time division multiple access standard. TDMA as a standard (also referred to as IS-54, IS-136, or D-AMPS) refers to particular wireless cellular telephony communications protocols and signal specifications designed to coexist with the prior United States analog (AMPS) cellular telephone system using the same frequency and channel allocations.

35 U.S.C. §103 Rejection

Lundqvist in view of Fox, Larsson, Law, and Salinger

The Examiner has rejected the remaining dependent claims as obvious over Lundqvist, in view of various other references. None of these references overcome the shortcomings of Lundqvist discussed above. Accordingly all of the dependent claims are believed to be allowable for their dependence on an allowable independent claim. Applicants do not concede that the other references are combinable with or show what the Examiner suggests, however, the full explanations are not set out here as they are unnecessary at this stage in the prosecution.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

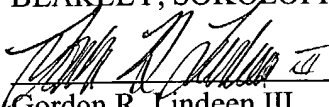
Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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Date: 8/2/4


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